

ABSTRACT

A method for distributing the QOS processing in a broadband access system to the system modems and the head-end equipment. Requests for a change in the operating parameters are transmitted on an exception basis, thereby greatly reducing the amount of system over-head required. In the upstream, the Cable Modem Termination System (CMTS) or Wireless Modem Termination System (WMTS or Wireless Hub) determines a signal-to-noise ratio (SNR) or Bit Error Rate (BER) (or similar measurable parameter) quality data for each received packet. If a measured parameter is outside of the predetermined limits, then the WMTS reports to the NMS (Network Management Operating System) the modem ID and the measured data of the particular packet. The NMS may then modify the operating parameters.

In the downstream, each modem determines an SNR or BER (or some other measurable parameter) measurement for the incoming packets. These values may be compared to some boundary conditions. If the system is performing outside the boundary conditions, the modem sends an exception message to the NMS which reassigns the modem to a different downstream channel or modifies the channel parameters.